



DEPARTMENT: ACD/ ACADEMIC

TITLE: Program Specifications

CODE : ACD/AC - FO- 1.1-E

DATE D'IMPLEMENTATION: 18/ 01/2021

DATE DE REVISION: 18/01/2024

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Department	Orthodontics & Dentofacial Orthopedics	Date	January 21 st 2021
		Head of Department	Associate Professor Fidel NABBOUT

Insert program administrative flowchart

Master in Orthodontics & Dentofacial Orthopedics Department Staff Chart

Head of Department: Associate Professor Fidel NABBOUT (FT)

Department Council:

Associate Professor Fidel NABBOUT (FT),
Assistant Professor Antoine Antoine Saadé (PT),
Assistant Professor Antoine DARAZE (PT),
Assistant Professor Maria SAADEH (PT),
Doctor Hani HASBINI (PT),
Doctor Marwan HOTEIT (PT),
Doctor Mona SAYEGH GHOUSSOUB (PT).

Master Coordinator: Doctor Mona SAYEGH GHOUSSOUB.

Staff in charge of teaching courses:

Associate Professor Fidel NABBOUT: Tweed-Merrifield technique, Steiner cephalometric analysis, Principles of biomechanics.

Assistant Professor Antoine Saadé: Diagnosis, Treatment planning.

Assistant Professor Antoine DARAZE: Eruption abnormalities.

Assistant Professor Maria SAADEH: Growth and development, Research.

Doctor Hani HASBINI: Functional appliances, Clinical examination.

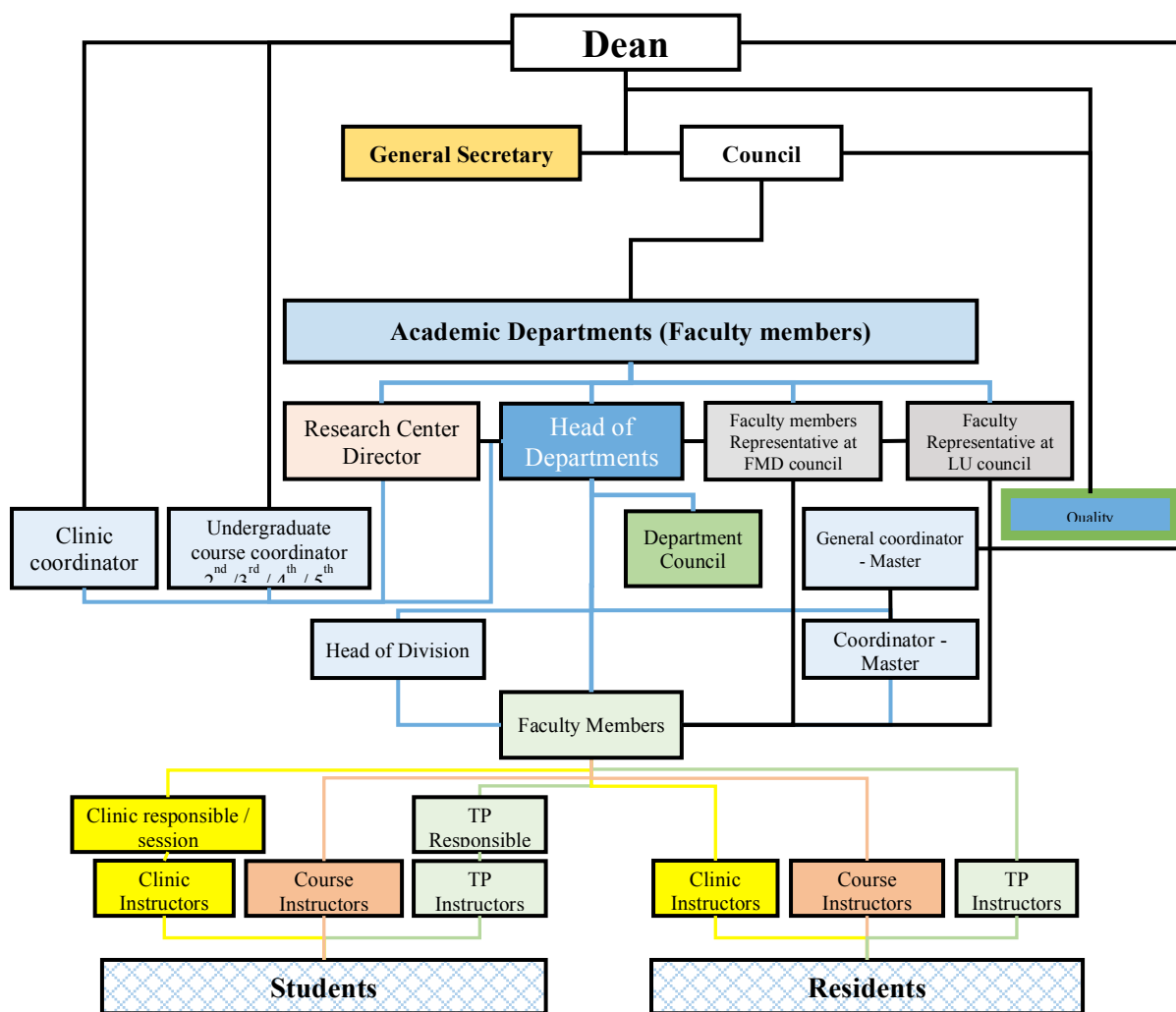
Doctor Marwan HOTEIT: Esthetics.

Doctor Mona SAYEGH GHOUSSOUB: Cephalometric and anatomical radiology, Management of orthodontic malocclusions.

Staff: Assistant Professor Ghada ASMAR (PT), Assistant Professor Bilal KOLEILAT (PT), Assistant Professor Samar BOU ASSI (PT), Doctor Chimene CHALALA (PT).

(FT): Full Time; (PT): Part Time.

Simplified Organizational / Governance chart of the program





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A. Program Identification and General Information			
1. Program titles	1- Master in Orthodontics 2- Master of Science in Orthodontics	Program Code	1-ORTD M"0" "000" 2- Not launched yet
2. Total credit hours needed for completion of the program	1- 250 credits. Thesis has no credits. 2- 280 credits. Same as previous program with in addition a research Thesis (30 credits). This program has not been launched yet.		
3. Award granted on completion of the program			
1- Master in Orthodontics 2- Master of Science in Orthodontics			
4. Professional occupations (licensed occupations, if any) for which graduates are prepared. (If there is an early exit point from the program (e.g. diploma or associate degree) include professions or occupations at each exit point)			
1. Specialist in Orthodontist 2. There is no exit point for this program			
5. (a) New Program	Master of Science in Orthodontics	Planned starting date	No plans yet
(b) Continuing Program	Master in Orthodontics	Year of most recent major program review	2016
6. Name of program chair or coordinator.		Mona SAYEGH GHOUSSOUB	
7. Date of approval by the authorized body		2016	
B. Program Context			
1. Explain why the program was established.			
<p>Since its foundation, the Faculty of Dental Medicine has always been involved in postgraduate education. Continuous education programs for general dental practitioners and a “Diplôme Universitaire” (started later in 1994) were taught at the Faculty. Learning from these experiences, to start a Master degree is a natural promotion and improvement of the postgraduate programs along with the second important program that the Faculty proposes: A Doctorate in Odontological Sciences.</p>			
a. Summarize economic reasons, social or cultural reasons, technological developments, national policy developments or other reasons.			
<ul style="list-style-type: none"> • Before 2016 the postgraduate program was a "Diplome Universitaire" (DU) from 1994-2016. This degree was creating problems for our graduates who wanted to practice in arab countries. • The Lebanese University as a whole adopted the Licence / Master / Doctorat format in learning and created the courses with credits. It was a good opportunity to switch from a DU to a Master degree with courses and credits. It was decided to create a Master degree to improve scientific standards, start research projects, allow dentists to have a Master degree and open the door for staff wanting to pursue a Doctorate thesis. • In 2016, It was decided to create a Master degree to improve scientific standards, start research projects, allow dentists to align with other major countries who deliver Master degrees like France and the Arab countries because a great number of our students end up working in Arab countries or studying in France. 			



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b. Explain the relevance of the program to the mission and goals of the institution.

In line with the Mission of the Lebanese University in general and the Mission of the Faculty of Dental Medicine in particular, the Master in Orthodontics program aims to:

- Prepare and develop evidence based academic and clinical programs thus developing their critical thinking and train them to become skilled clinicians.
- Promote scientific research and continuing education programs
- Work towards a better health system in the country and promote the preventive education and health of the Lebanese society.
- Deliver and ensure an administrative and academic culture in accordance of high quality standards.
- As for the goals, "Providing continuing training and quality public education" and "allowing competent training of the scientific community" are two main goals of the mission and goals of the Lebanese University. This program is in line with these goals and allows all future staff, students from our University or from other Universities locally and internationally to have a higher degree of education.

2. Relationship (if any) to other programs offered by the institution/college/department.

a. Does this program offer courses that students in other programs are required to take? **Yes** **No**

If yes, what has been done to make sure those courses meet the needs of students in the other programs?

Residents from the Departments of "Pedodontics", "Periodontics" and "Restorative Dentistry and Esthetics" take some lectures related to their relation and collaborative work with the orthodontic department.

b. Does the program require students to take courses taught by other departments? **Yes** **No**

If yes, what has been done to make sure those courses in other departments meet the needs of students in this program?

- Residents have common courses taken with other Master programs. These courses are: BASC M1 101 to 105, BASC M2 106 TO 112, MNGMT M1 101 AND 102, ORTD M1 109, ORTD M2 117, ORTD M2 121, ORTD M3 207, ORTD M3 207, ORTD M4 213 and ORTD M5 304.

These courses are needed for residents to have a multidisciplinary approach to orthodontic treatments especially when interacting with the Departments of Periodontics, Pedodontics, Oral Surgery, Maxillofacial Surgery and Restorative Dentistry and Esthetics. These common courses help to reach that goal.

3. Do students who are likely to be enrolled in the program have any special needs or characteristics? (e.g. Part time evening students, physical and academic disabilities, limited IT or language skills). **No** **Yes**

Not applicable

4. What modifications or services are you providing for special needs applicants?

Not applicable

C. Mission, Goals and Objectives

1. Program Mission Statement (insert)

The Master program seeks to enhance the educational, research, clinical, and community service missions by providing an environment where:

- Orthodontic residents are educated to provide high quality oral health care based on sound scientific principles
- Residents provide patients with proper multidisciplinary approach of orthodontic care
- Faculty, program staff members and residents display high standards of ethics and value diversity, respect patients, share responsibility by working together toward academic, professional, and personal growth
- The program is lead by faculty members coming from different educational background thus having different approaches and techniques to motivate residents and staff towards excellence
- The community benefits from program service and devotion to quality health care

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environment where Orthodontic residents are educated to treat patients with proper multidisciplinary approach of Orthodontics care providing high quality oral health care based on sound scientific principles. Moreover, the program is led by faculty members coming from different educational background thus having different approaches and techniques to motivate residents and staff towards excellence. Faculty, program staff members and residents display high standards of ethics and value diversity, respect patients, share responsibility by working together toward academic, professional, and personal growth. Finally, the community benefits from program service and devotion to quality health care.

2. List Program Goals (e.g. long term, broad based initiatives for the program, if any)

The Department of Orthodontics aims to be characterized in the proficient preparation of future specialist orthodontists in Lebanon in conformity with the highest international standards. The main objectives of the program are:

1. Develop a teaching program that is not limited to just one technique, but includes a variety of so-called popular methods.
2. Train clinically expert specialists with a deep academic vision of orthodontics.
3. Teach the orthodontic resident the advantages of different treatment philosophies and develop skills in the clinical application of these principles.
4. Acquire not only a precise judgment to handle fixed and removable devices (functional and retention), but also a broad spectrum of treatment possibilities in patients of different ages, both children and adults. , which includes early treatment, comprehensive and corrective treatment in adolescents and adults, and treatment combining orthodontics and orthognathic surgery.
5. Encourage Residents to use the latest developments in computer technology to assist them in their research and clinical practice.
6. Analyze and interpret scientific publications independently.
7. Adopt a continuous improvement approach integrating skills development.
8. Optimizing digital solutions essential to education.

• **Midterm goals:**

- To develop strategies of the educational program where objectives of the conventions should be used: activate mobility of student, and staff, develop a logbook for this exchange (for credits, etc...) Exchange of scientific information, activate and develop research project with other universities
- To develop and perform the use of new technology in the master program (laser, CAD/CAM, Dolphin)

• **Long term goal:**

- Launch the Master of Science in Orthodontics.

3. List major objectives of the program within to help achieve the mission. For each measurable objective describe the measurable performance indicators to be followed and list the major strategies taken to achieve the objectives.

Measurable Objectives	Measurable performance indicators	Strategies
<p>Resident recruitment choices: Creating a dual program: Master in Orthodontics and Master of Sciences in Orthodontics to encourage residents choosing between a more clinical oriented program or a more research oriented one.</p>	<p>• Percentage of applicants to the program in increase Every year since the Master in Orthodontics program started the recruitment is full. Students applying to this program are usually more than the maximum number the program can</p>	<p>1- Maintain high standards of education and learned clinical skills that encourage residents to apply for this Master in Orthodontic program. This clinical program has 49.5% of</p>



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	<p>handle, a clear sign that there is high demand to be accepted</p> <ul style="list-style-type: none"> • Percentage of high satisfaction of graduates <p>Based on the reports of the quality committee, the satisfaction of graduates concerning the professional skills and experience they acquired through the courses such as acquiring management skills and experiences teamwork, communication and problem-solving skills, ranked high, with a score of 4.60 out of 5.</p>	<p>clinical sessions credits and 41.4% of theory.</p> <ol style="list-style-type: none"> 2- Every year since the Master in Orthodontics program started the recruitment is full with a maximum number needed of residents applying and accepted. Before the covid-19 crisis we even had more residents than the requested number. 3- The need to develop and perform new technologies to attract new applicants for the program 4- The need to start in the new future the Master of Science in Orthodontics.
<p>Biomedical / basic sciences: Expose residents to the biomedical and basic sciences, emphasize basic science-orthodontic interrelationships, and encourage synthesis and application of this knowledge in clinical practice.</p>	<ul style="list-style-type: none"> • Percentage of biomedical and basic sciences courses From the 41.4% of theory courses, 8.2% of the program credits 205 hours of lectures. (NOTE THAT CREDIT PERCENTAGE IS DIFFERENT THAN NUMBER OF HOURS TAUGHT) is dedicated to biomedical and basic sciences to ensure that residents have a broad knowledge in medical related problems for a better service to patients • Percentage of special needs patients treated in the department or by resident • Percentage of residents satisfy by the use of new technologies 	<ol style="list-style-type: none"> 1- In the program, courses are dedicated to biomedical and basic sciences to ensure that residents have a broad knowledge in medical related problems for a better service to patients. 2- Apply the use of new technologies: Cad/Cam, biophysics and laser technologies in the clinics
<p>Diagnostic and treatment planning: Provide residents with sufficient clinical and practical experience to become proficient in diagnostic data collection, diagnosis, treatment planning and treatment sequencing of complicated orthodontic patients.</p>	<ul style="list-style-type: none"> • Percentage of cases treated by resident Every resident has fulfilled an average of 70 treatment plans in 3 years. A treatment plan includes full X-rays, clinical photos, discussing the treatment plan options with an instructor. • Percentage of clinical cases requirements achieved by residents 100% of the requirements are achieved by the residents. 	<ol style="list-style-type: none"> 1- Each patient is carefully studied, full Xrays technologies applied (Conventional Xrays such as panoramic and cephalometric radiographs, handwrist as well as 3D imaging CBCT), study models, extra & intraoral photos are taken. 2- Several clinical options discussed with the instructor and/or department staff and with the patient before



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		<p>starting a procedure</p> <ol style="list-style-type: none"> 3- Ensure that the resident has a wide and broad view of the clinical possibilities according to the clinical case situation and guide the resident into taking the correct decision. 4- A consent form is signed by the patient before surgical procedure. 5- The final treatment plan is presented by the resident and discussed with the staff members of the department, in the presence of all years residents. 6- Once approved, the treatment plan is signed by the instructor in charge and the master coordinator.
<p>Review of Relevant Professional Literature: Expose residents to orthodontic and related literature to develop historical perspective and provide theoretical bases for diagnosis, techniques and procedures, management, success, and failures/complications in the clinical application of either conventional or novel biomechanics in orthodontics.</p>	<ul style="list-style-type: none"> • Percentage of theory credits From the 41.4% of theory credits, 91.8% of credits is dedicated to Orthodontic lectures. • Rate of Orthodontic lectures attended by resident Rate of Orthodontic lectures attended by resident is 830 hours in the program. This proportion is 33.2% of the program. • Rate of orthodontic seminars While 8.8% of all the program credits is dedicated to Orthodontic seminars and workshops. Rate of seminars, workshops given is 330 hours in the program. 	<ol style="list-style-type: none"> 1. Lectures, seminars, and practical sessions give all information needed to develop the necessary skills to master all procedures and techniques used in orthodontics in a detailed description and wide range of references 2. The concept of evidence based treatments is also learned to further give the resident the best up to date knowledge 3. This is the major role of the seminars and workshop sessions in all courses taken in Orthodontics. The Basic Science course on Article and Research and the Thesis preparation are also another form putting into practice this issue.
<p>Clinical Proficiency and Patient Satisfaction: Ensure resident proficiency in the orthodontic practice necessary to support the clinical diagnosis and treatment of orthodontic patients.</p>	<ul style="list-style-type: none"> • Percentage of clinical sessions 49.5% of all the program credits are clinical sessions. Rate of clinical sessions is 1868 hours in the program. 	<ol style="list-style-type: none"> 1- Perform Orthodontic wire bending & Typodont 2- During a clinical session, every 1 to maximum 3 residents are taken in charge



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	<ul style="list-style-type: none"> • Percentage of patients attending the orthodontic clinics • Percentage of patients on the waiting list • Estimating period time to take an appointment 	<p>by 1 instructor. An excellent ratio to learn and progress.</p> <ol style="list-style-type: none"> 2- Residents have practical sessions to learn how to deal in the clinical situations with patients 3- Complex clinical cases are discussed between all staff members and opinions come from different backgrounds 4- Clinics are well managed and heavily equipped to provide the best environment to work efficiently 5- Working with top rated specialized orthodontic laboratories in the country that use CAD/CAM technology and materials
<p>Patient Satisfaction Provide orthodontic treatments for patients in the areas of comfort, function and esthetics in an ethical manner</p>	<ul style="list-style-type: none"> • Percentage of patients coming back for complaints • Percentage of patients who stopped the treatment in the Faculty • Percentage of patients (long treatment time) 	<ol style="list-style-type: none"> 1- Train residents to provide quality, complete patient care in a timely and efficient manner using state-of-the-art technology and patient management skills so that patients are satisfied and become ambassadors for the program. 2- The master program is always full with patients. We even have a waiting list for patients that we cannot treat because all residents have filled all their clinical time. 3- Each clinical work is divided into smaller carefully controlled steps. The resident cannot start a new step before getting the approval from his clinical instructor.
<p>Faculty staff: Provide a faculty formed of high quality specialists in orthodontics with broad clinical skills, knowledge, and expertise.</p>	<ul style="list-style-type: none"> • Number of publications The number of Publications in the last 4 years by the Master staff is 38 PubMed indexed papers that is 9 papers /year for 11 Faculty staff. • Number of Doctorate by the Master 	<ol style="list-style-type: none"> 1. Faculty members have renowned diplomas such as Doctorates, CECSMO and Master degrees; and have studied in Lebanon, France, Unites States, Finland and other countries. This diversity of knowledge gives



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	<p>staff Number of doctorate during the last 4 years by the Master staff is 6.</p>	<p>a very efficient melting pot of clinical skills. 2. Activate the use of conventions output</p>
<p>Research & Scholarly Activity: Provide formal instruction on research design, research protocol development, biostatistics, and report/thesis writing.</p>	<ul style="list-style-type: none"> • Percentage of Thesis related to research: 100% Of thesis are related to research following the IMRAD structure. 	<p>1- Although this program is mainly clinically oriented because it is a "Master Professional" still the resident has a wide acquaintance of the research protocols and studies via the seminars and workshops sessions 2- Some residents choose an epidemiological or research thesis and learn how to do research effectively. 3- The thesis concludes the master program and it follows three categories: a) case reports treated by the residents b) pilot study (at least 3 samples) c) epidemiology study d) Thesis defend is in public, in front of a jury. e) Part of the thesis exam includes a 20 minutes' oral presentation. 4- Once the Master of Science in Orthodontics program will be launched, residents will have a real experience on how to conduct a research. Thesis credits will be validated and counted for 12% of the program.</p>
<p>Continuous education: Encourage residents to join national and international orthodontic organizations with the expectation that they will contribute to dentistry, to their specialty, and to their local communities through service thus preparing graduates to be life-long learners.</p>	<ul style="list-style-type: none"> • Percentage of lectures given by resident in the scientific meetings 32 lectures given during conventions by instructors • Percentage of posters given by resident in the scientific meetings 46 posters presented during conventions/Resident 	<p>1- Faculty and Residents have to become members of the Lebanese Orthodontic Society. Some of them are also members in scientific societies abroad. 2- Faculty and Residents have to attend the scientific meetings organized by all Dental Associations and</p>



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- **Number of continuous education / program /year**
5 continuous educations program /year, it was interrupted during Covid pandemic

other Faculties in the country.
3- Some Faculty and residents attend and participate in events abroad.

D. Program Structure and Organization

1. Program Description: List the core and elective program courses offered each semester from First Year to graduation using the below Curriculum Study Plan Table

A 3 years program divided into 6 semesters. Each semester is 16 weeks. The program consists of 68 courses: 41 "orthodontic", 13 "basic sciences", 12 "common courses" and 2 "management courses" (with all master programs). Orthodontic courses are series of lectures, seminars, workshops, practical (Typodont, Wire bending as well as Cephalometric tracing and analyses) and clinical sessions. A Master thesis is required at the end of the program. Each course's name has two denominations.

Program sections:

The program is divided into 3 main sections: Theory, practical and clinical.

1- Theory (residents learn: "Know") is divided into 3 categories: Lectures given by the instructor, seminars given by the residents over a recent topic and workshops where the instructor discusses and analyzes a scientific paper with the residents over a recent topic.

2- Practical (residents apply: "Know how") is a session where residents put into practice the theory they assimilated.

3- Clinical (residents apply: "Know how" and react with patients, technicians, colleagues: "Attitude") is a session where residents actually treat patients.

Credit calculations:

1 credit equals:

- 10 h lectures
- 15 h for each of the following: Seminars, workshop, practical session and clinical session.

Nomenclature:

1. Theory:

a: Lecture is named "L" followed by the order of the lecture. For example "L1" is the first lecture.

b: Seminar is named "S" followed by the order of the seminar. For example: "S1" is the first seminar

c: Workshop is named "W" followed by the order of the workshop. For example: "W1" is the first workshop

2. Practical is named with the letter "P" followed by the order of the session. For example "P1" is the first practical session

Clinical is named with the letter "C" followed by the order of the session. For example "C1" is the first clinical session

The first denomination indicates the timing of the course. It starts by the letters "ORTD" (Orthodontics) followed by the letter "M" (Master) and a number (from 1 to 6): This number indicates the semester. Example: ORTD M1 is the first semester. The second denomination has 3 numbers: The first number is the year the course is given, the second number is "0" and the third number is the order in which the course is given. Example 101 is the first year, first course. This denomination is the same whether the course is a series of lectures, seminars, workshops, practical or clinical sessions. The Common courses first denominations are "BASC" for the basic sciences, "MNGT" for management.

In this chart, the denomination "ORTD" is replaced by the letters "PR" while the denomination of the basic sciences course "BASC" is replaced by the letters "BS". Finally the management course is replaced by the letters "MN".

A **theoretical lecture, seminar or workshop** is written in red.



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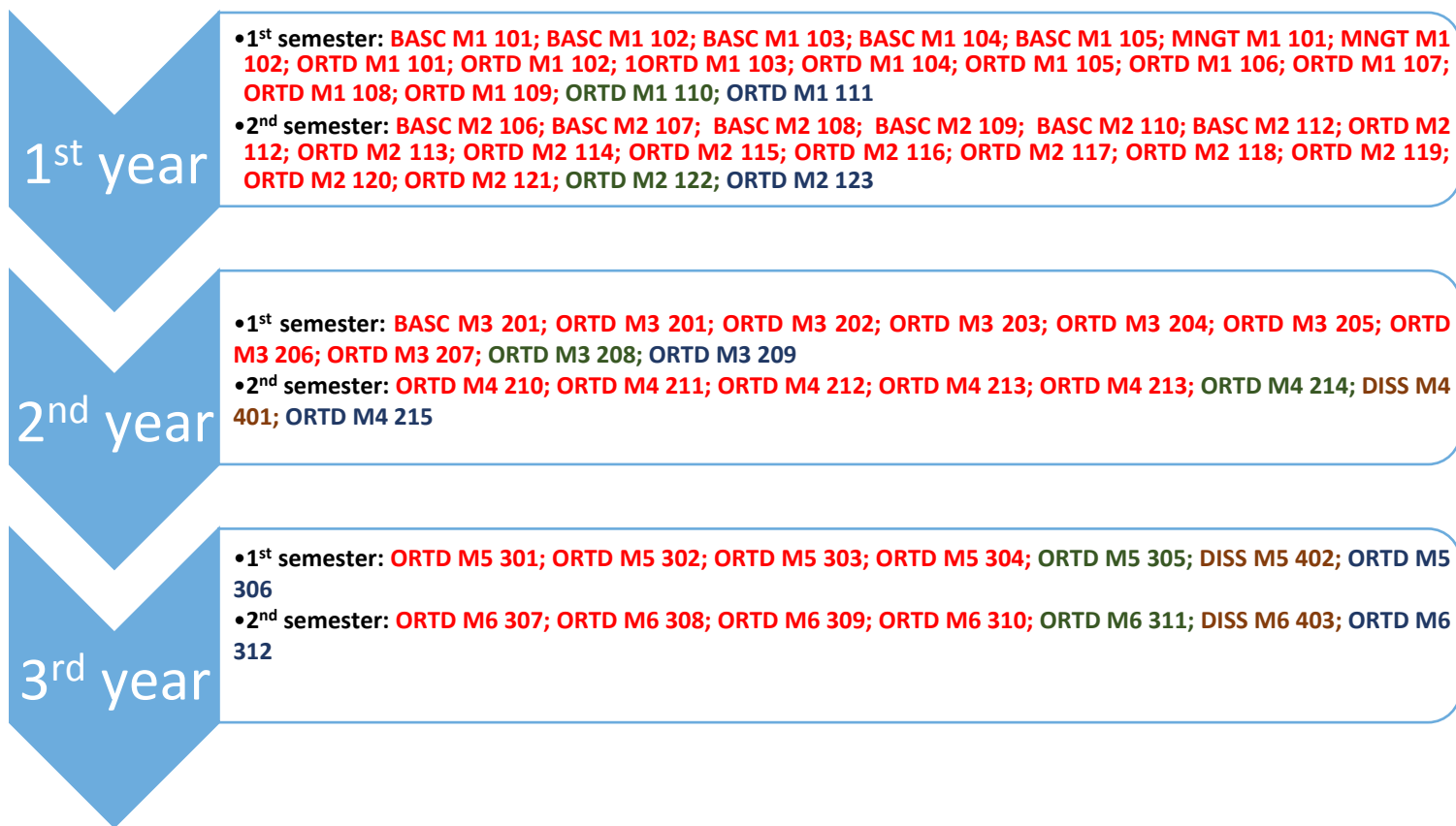
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A **practical session** is written in green

A **clinical session** is written in blue.

A **thesis** is written in brown.



Curriculum Study Plan Table

* Prerequisite – list course code numbers that are required prior to taking this course.

Semester #	Course Code	Course Title	Required or Elective	Prerequisite Course	Credit Hours
S1	BASC M1 101	Histology & Embryology / Stem Cells (15)	R	No	1.5
	BASC M1 102	Oro-facial Physiology (15)	R	No	1.5
	BASC M1 103	Topographic Anatomy (15)	R	No	1.5
	BASC M1 104	Microbiology (15)	R	No	1.5
	BASC M1 105	Immunology (15)	R	No	1.5



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MNGT M1 101	Strategy, Organization and Action Plan (15)	R	No	1.5
MNGT M1 102	Quality Systems, Accounting and Legal Affairs (15)	R	No	1.5
ORTD M1 101	Management of patients medically compromised + Medical emergencies in the dental clinic (20)	R	No	2
ORTD M1 102	Radiology Level 1 (10)	R	No	1
ORTD M1 103	Diagnosis - Cephalometrics - facial esthetics - history of orthodontics (80)	R	No	8
ORTD M1 104	Treatment planning- various orthodontic techniques and appliances- mechanics of tooth movement- properties of wires (80)	R	No	8
ORTD M1 105	Growth- teeth development and eruption (20)	R	No	2
ORTD M1 106	Interdisciplinary approach: occlusion and temporomandibular joint dysfunction - radiology- periodontics- orthognathic surgery... (30)	R	No	3
ORTD M1 107	Statistics- research (20)	R	No	2
ORTD M1 108	Evaluation on case reports (20)	R	No	2
ORTD M1 109	Interdisciplinary seminars (35) <ul style="list-style-type: none"> • Critical review of current orthodontic themes • Faculty meetings seminars • Maxillofacial orthopedics • Seminars in periodontics • Guest seminars 	R	No	3.5
ORTD M1 110	Seminars and hands-on: (60) <ul style="list-style-type: none"> • Journal club • Hands-on • Case presentations • Cephalometry • Clinical photography 	R	No	4



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		<ul style="list-style-type: none"> Bonding/banding and typodont Orthodontic laboratory Literature review 			
	ORTD M1 111	Orthodontic clinic 1 (135)	R	No	9
S2	BASC M2 106	Molecular Biology (15)	R	No	1.5
	BASC M2 107	Biophysics and Lasers (15)	R	No	1.5
	BASC M2 108	Dental Biocompatilby (15)	R	No	0.5
	BASC M2 109	Laboratory Tests: Routine and Special Histological Techniques - Cell Cultures - Biochemical Techniques (20)	R	No	2
	BASC M2 110	Biostatistics (15)	R	No	1.5
	BASC M2 111	Article analysis and bibliographic research (10)	R	No	1
	BASC M2 112	Cad/Cam technology (10)	R	No	1
	ORTD M2 112	Radiology Level 2 (10)	R	No	1
	ORTD M2 113	Periodontology (10)	R	No	1
	ORTD M2 114	Ortho & Esthetics (5)	R	No	0.5
	ORTD M2 115	Treatment planning- various orthodontic techniques and appliances- mechanics of tooth movement- wire properties (80)	R	No	8
	ORTD M2 116	Growth- teeth development and eruption (20)	R	No	2
	ORTD M2 117	Interdisciplinary approach: periodontology- orthognathic surgery... (30)	R	No	3
	ORTD M2 118	Management in orthodontics- statistics- research (20)	R	No	2
	ORTD M2 119	Evaluation on case reports (20)	R	No	2
ORTD M2 120	Evaluation on article discussion and literature review (10)	R	No	1	



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	ORTD M2 121	Interdisciplinary seminars (30) <ul style="list-style-type: none"> • Critical review of current orthodontic themes • Faculty meetings seminars • Maxillofacial orthopedics • Seminars in periodontics • Guest seminars 	R	No	3
	ORTD M2 122	Seminars and hands-on: (60) <ul style="list-style-type: none"> • Journal club • Hands-on • Case presentations • Cephalometry • Clinical photography • Bonding/banding and typodont • Orthodontic laboratory • Literature review 	R	No	4
	ORTD M2 123	Orthodontic clinic 2 (120)	R	No	8
S3	BASC M3 201	Cad/Cam technology (10)	R	No	1
	ORTD M3 201	Anesthesia and sedation (5)	R	No	0.5
	ORTD M3 202	Dental developmental anomalies (5)	R	No	0.5
	ORTD M3 203	Biomedical ethics (10)	R	No	1
	ORTD M3 204	Informatique (10)	R	No	1
	ORTD M3 205	Composites & Adhesives (5)	R	No	0.5
	ORTO M3 206	Evaluation on article discussion and literature review (10)	R	No	1
	ORTD M3 207	Interdisciplinary seminars (35) <ul style="list-style-type: none"> • Critical review of current orthodontic themes • Faculty meetings seminars • Maxillofacial orthopedics • Seminars in periodontics • Guest seminars 	R	No	3.5
ORTD M3 208	Seminars and hands-on: (60) <ul style="list-style-type: none"> • Journal club 	R	No	4	



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		<ul style="list-style-type: none"> • Case presentations • Bonding/banding and typodont • Orthodontic laboratory • Literature review • Problem solving in orthodontics 			
	ORTD M3 209	Orthodontic clinic 3 (360)	R	No	24
S4	ORTD M4 210	Medical Psychology (10)	R	No	1
	ORTD M4 211	Evaluation on case reports (20)	R	No	2
	ORTD M4 212	Evaluation on article discussion and literature review (10)	R	No	1
	ORTD M4 213	Interdisciplinary seminars (30) <ul style="list-style-type: none"> • Critical review of current orthodontic themes • Faculty meetings seminars • Maxillofacial orthopedics • Seminars in periodontics • Guest seminars 	R	No	3
	ORTD M4 214	Seminars and hands-on: (60) <ul style="list-style-type: none"> • Journal club • Case presentations • Bonding/banding and typodont • Orthodontic laboratory • Literature review • Problem solving in orthodontics 	R	No	4
	DISS M4 401	Thesis (250)	R	No	0
	ORTD M4 215	Orthodontic clinic 4 (390)	R	No	26
S5	ORTD M5 301	Traumatology (5)	R	No	0.5
	ORTD M5 302	Evaluation on case report (20)	R	No	2
	ORTD M5 303	Evaluation on article discussion and literature review (10)	R	No	1
	ORTD M5 304	Interdisciplinary seminars (30) <ul style="list-style-type: none"> • Critical review of current 	R	No	3



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		orthodontic themes <ul style="list-style-type: none"> • Faculty meetings seminars • Maxillofacial orthopedics • Seminars in periodontics • Guest seminars 			
	ORTD M5 305	Seminars and hands-on: (45) <ul style="list-style-type: none"> • Journal club • Case presentations • Bonding/banding and typodont • Orthodontic laboratory • Literature review • Problem solving in orthodontics 	R	No	3
	DISS M5 402	Thesis (250)	R	No	0
	ORTD M5 306	Orthodontic clinic 5 (428)	R	No	28.5
S6	ORTD M6 307	Evaluation on case reports (20)	R	No	2
	ORTD M6 308	Evaluation on article discussion and literature review (10)	R	No	1
	ORTD M6 309	Evaluation on global knowledge in orthodontics (20)	R	No	2
	ORTD M6 310	Forensic sciences and orthodontics (10)	R	No	1
	ORTD M6 311	Seminars and hands-on: (45) <ul style="list-style-type: none"> • Journal club • Case presentations • Bonding/banding and typodont • Orthodontic laboratory • Literature review • Problem solving in orthodontics 	R	No	3
	DISS M6 403	Thesis (250)	R	No	0
	ORTD M6 312	Orthodontic clinic 6 (435)	R	No	29

2. Required Field Experience Component (if any) (e.g. internship, cooperative program, work experience)

Summary of practical, clinical or internship component required in the program. Note: see Field Experience Specification

a. Brief description of field experience activity

Residents have to attend clinical sessions around 24 hours/week depending on the semester, to complete 1868 hours of clinical work in 3 years.

b. At what stage or stages in the program does the field experience occur? (e.g. year, semester)



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Clinical work starts since the first year semester one
c. Time allocation and scheduling arrangement.
Semester 1: 135 clinical hours divided into 2 sessions of 4 hours each Semester 2: 120 clinical hours divided into 2 sessions of 4 hours each Semester 3: 360 clinical hours divided into 5 sessions of 4 hours each Semester 4: 390 clinical hours divided into 5 sessions of 4 hours each Semester 5: 428 clinical hours divided into 6 sessions of 4 hours each Semester 6: 435 clinical hours divided into 6 sessions of 4 hours each
d. Number of credit hours (if any)
Total clinical hours: 1868; Total clinical credits: 124.5 (49.8% of all credits)
3. Project or Research Requirements (if any)
Summary of any thesis requirement in the program. (Other than projects or assignments within individual courses)
a. Brief description
Thesis options are of 3 types: 1. A literature review on a specific subject followed by a case series done by the resident not less than 3 clinical ones. 2. An epidemiological study 3. A research thesis following the IMRAD structure. To be able to apply for this option the resident must have general grades of at least 16/20 in all courses.
b. List the major intended learning outcomes of the project or research task.
Thesis options 1 and 2 are for a "master professionnel" while option 3 is for a "master de recherche". Learning outcomes of options 1 and 2; <ul style="list-style-type: none"> Learn to select a paper (indexed in PubMed, Famous author or not, use search engines like pubmed, google scholar, etc...) Learn to read, analyze and summarize a paper Get to know how to write a literature review Get to have a critical thinking process Learn epidemiological steps and procedures (in case epidemiology is chosen) Learn to build and present a PowerPoint presentation and respect the allocated time. Learning outcomes of option 3: <ul style="list-style-type: none"> All the above plus learn to plan a research, execute and write a proposal. Learn to execute an experiment, analyze the results and discuss them Learn to write the thesis following the IMRAD format
c. At what stage or stages in the program is the project or research undertaken? (e.g. level)
2 rd year, first semester
d. Number of credit hours (if any)
No credits for options 1 and 2. 30 credits for option 3
e. Description of academic advising and support mechanisms provided for students to complete the project.
Residents have a thesis director.
f. Description of assessment procedures (including mechanism for verification of standards)
Once the thesis is ready the thesis director signs a release paper. The Dean appoints a reviewer to evaluate it. The reviewer signs a release paper. The Dean appoints 3 jury members for the oral examination and defense of the thesis. The thesis defense is public. The resident presents his thesis during a PowerPoint presentation and answers all questions.
Learning Outcomes in Domains of Learning, Assessment Methods and Teaching Strategy Program Learning Outcomes, Assessment Methods, and Teaching Strategy work together and are aligned. They are joined together as one, coherent, unity that collectively articulate a consistent agreement between student learning and teaching. The National Qualification Framework (NQF) provides three learning domains. Learning outcomes are required in these three domains.



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On the table below are the five NQF Learning Domains, numbered in the left column.

First, insert the suitable and measurable learning outcomes required in each of the learning domains. **Second**, insert supporting teaching strategies that fit and align with the assessment methods and intended learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each program learning outcomes, assessment method, and teaching strategy ought to reasonably fit and flow together as an integrated learning and teaching process.

	NQF Learning Domains and Learning Outcomes	Teaching Strategies	Assessment Methods
01	Knowledge		
1.1	State various multidisciplinary treatment plan.	Lectures, seminars	Continuous evaluation, written examination
1.2	Analyze the orthodontic/surgical results by communicating with the maxillofacial surgeon to enhance treatment outcomes.	Lectures, seminars	Continuous evaluation, written examination
1.3	Distinguish the different surgical options when setting up orthodontic/surgical treatment plans.	Lectures, seminars	Continuous evaluation, written examination
1.4	Investigate the periodontal contribution to orthodontic treatment.	Lectures, seminars	Continuous evaluation, written examination
1.5	Inspect the orthodontic contributions to periodontal treatment.	Lectures, seminars	Continuous evaluation, written examination
1.6	Interpret the adverse effects of orthodontics on periodontal tissues.	Lectures, seminars	Continuous evaluation, written examination
1.7	Recognize the different radiological techniques (bi and tridimensional).	Lectures, seminars	Continuous evaluation, written examination
1.8	Identify the different structures and pathologies on radiographic images.	Lectures, seminars	Continuous evaluation, written examination
1.9	Describe the methodology of TMJ examination and exploration.	Lectures, seminars	Continuous evaluation, written examination
1.10	Recognize the mechanism of tooth eruption, physiologic and biological response to tooth movement.	Lectures, seminars	Continuous evaluation, written examination
1.11	Relate the effect of adverse reactions to tooth movement based on the patient's periodontal conditions.	Lectures, seminars	Continuous evaluation, written examination
1.12	Develop a critical thinking while dealing with complex multidisciplinary orthodontic clinical cases.	Lectures, seminars	Continuous evaluation, written examination
1.13	Explain different interdisciplinary treatment approaches.	Lectures, seminars	Continuous evaluation, written examination
1.14	Optimize the orthodontic results by communicating with specialists to enhance the outcomes.	Lectures, seminars	Continuous evaluation, written examination
1.15	Explore different options when setting up orthodontic treatment plans.	Lectures, seminars	Continuous evaluation, written examination
1.16	State a problem list with the matching multidisciplinary treatment options and limitations.	Lectures, seminars	Continuous evaluation, written examination



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1.17	Acquire enough knowledge to try new approaches and get familiar with the latest evidence-based techniques.	Lectures, seminars	Continuous evaluation, written examination
1.18	Describe pluridisciplinary approaches to treatment in orthodontics.	Lectures, seminars	Continuous evaluation, written examination
1.19	Construct the orthodontic/surgical results by communicating with the maxillofacial surgeon to enhance treatment outcomes.	Lectures, seminars	Continuous evaluation, written examination
1.20	Recognize different surgical options when setting up orthodontic/surgical treatment plans.	Lectures, seminars	Continuous evaluation, written examination
1.21	Identify the periodontal contribution to orthodontic treatment	Lectures, seminars	Continuous evaluation, written examination
1.22	Identify the orthodontic contributions to periodontal treatment.	Lectures, seminars	Continuous evaluation, written examination
1.23	Define the adverse effects of orthodontics on periodontal tissues.	Lectures, seminars	Continuous evaluation, written examination
1.24	Apply a critical thinking while dealing with complex multidisciplinary orthodontic clinical cases.	Lectures, seminars	Continuous evaluation, written examination
1.25	Interpret current orthodontic themes objectively based on scientific thinking and methodology.	Lectures, seminars	Continuous evaluation, written examination
1.26	Apply a critical approach in some non-evidence-based studies.	Lectures, seminars	Continuous evaluation, written examination
1.27	Recognize the symbiotic relationship between orthodontics and other disciplines.	Lectures, seminars	Continuous evaluation, written examination
1.28	Identify the different side effects of orthodontic treatment.	Lectures, seminars	Continuous evaluation, written examination
1.29	Integrate the different retention methods and their indications.	Lectures, seminars	Continuous evaluation, written examination
1.30	Distinguish the different scenarios of canine impaction.	Lectures, seminars	Continuous evaluation, written examination
1.31	Explain the principles of orthognathic surgery in particular orthodontic treatment plans.	Lectures, seminars	Continuous evaluation, written examination
1.32	Estimate the long-term stability after the completion of orthodontic treatment.	Lectures, seminars	Continuous evaluation, written examination
1.33	Appraise the factors involved to minimize the iatrogenic lesions.	Lectures, seminars	Continuous evaluation, written examination
1.34	Discuss various interdisciplinary orthodontic treatment plans.	Lectures, seminars	Continuous evaluation, written examination
1.35	Recognize the appropriate interdisciplinary treatment plan by communicating with other specialists to enhance the outcomes.	Lectures, seminars	Continuous evaluation, written examination
1.36	Report different options when setting up orthodontic treatment plans.	Lectures, seminars	Continuous evaluation, written examination
1.37	Restate a problem list with the matching	Lectures, seminars	Continuous evaluation, written



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	multidisciplinary treatment options and limitations.		examination
1.38	Report different interdisciplinary orthodontic treatment plans.	Lectures, seminars	Continuous evaluation, written examination
1.39	Recognize the most appropriate treatment plan by communicating with specialists to enhance the outcomes.	Lectures, seminars	Continuous evaluation, written examination
1.40	Explore different options when setting up orthodontic treatment plans.	Lectures, seminars	Continuous evaluation, written examination
1,41	Formulate a treatment plan with the different sequences involving interdisciplinary approaches.	Lectures, seminars	Continuous evaluation, written examination
1.42	Restate a problem list with the matching multidisciplinary treatment options and limitations.	Lectures, seminars	Continuous evaluation, written examination
1.43	Express diverse interdisciplinary perspectives in orthodontics.	Lectures, seminars	Continuous evaluation, written examination
1.44	Define the appropriate interdisciplinary treatment plan by communicating with specialists to enhance the outcomes.	Lectures, seminars	Continuous evaluation, written examination
1.45	Investigate different options when developing orthodontic treatment plans.	Lectures, seminars	Continuous evaluation, written examination
1.46	Formulate a treatment plan with the different sequences involving interdisciplinary approaches.	Lectures, seminars	Continuous evaluation, written examination
1.47	Report a problem list with the matching multidisciplinary treatment options and limitations.	Lectures, seminars	Continuous evaluation, written examination
1,48	Integrate the future perspectives and emerging trends in orthodontics.	Lectures, seminars	Continuous evaluation, written examination
1.49	Recognize the different steps for a comprehensive orthodontic diagnosis including extra and intraoral examination.	Lectures, seminars	Continuous evaluation, written examination
1.50	Distinguish the proper complementary records indicated for the corresponding malocclusion.	Lectures, seminars	Continuous evaluation, written examination
1.51	Define the components of the esthetic face.	Lectures, seminars	Continuous evaluation, written examination
1.52	Express the five major aesthetic masses of the face (forehead, eyes, nose, lips, chin, throat).	Lectures, seminars	Continuous evaluation, written examination
1.53	Recognize the standards of normality for the smile types, smile curve, teeth displayed in the smile.	Lectures, seminars	Continuous evaluation, written examination
1.54	Describe the effect of facial growth and aging on the smile.	Lectures, seminars	Continuous evaluation, written examination
1.55	Recognize the different dental and skeletal malocclusions in the three planes of space.	Lectures, seminars	Continuous evaluation, written examination



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1.56	Identify the bony and soft tissue structures in radiographic cephalometry.	Lectures, seminars	Continuous evaluation, written examination
1.57	Interpret selected cephalometric analyses.	Lectures, seminars	Continuous evaluation, written examination
1.58	Detect any possible malformation on the radiograph.	Lectures, seminars	Continuous evaluation, written examination
1.59	Recognize the different orthodontic techniques and understand the use of specific appliances in each.	Lectures, seminars	Continuous evaluation, written examination
1.60	Know the indications, contra-indications, and timing of extracting hopeless first molars in orthodontics with emphasis on the mechanical and clinical concerns following this type of treatment.	Lectures, seminars	Continuous evaluation, written examination
1.61	Define the different biological ages (chronologic, dental, dental emergence and skeletal).	Lectures, seminars	Continuous evaluation, written examination
1.62	Recognize the sequence and timing of eruption of primary and permanent dentitions.	Lectures, seminars	Continuous evaluation, written examination
1.63	Distinguish the variability, clinical significance and norms discrepancies in the sequence and timing of emergence of primary and permanent teeth.	Lectures, seminars	Continuous evaluation, written examination
1.64	Understand the dental arch development in all three planes of space: sagittal, vertical and transversal.	Lectures, seminars	Continuous evaluation, written examination
1.65	Know the factors affecting normal eruption of both dentitions.	Lectures, seminars	Continuous evaluation, written examination
1.66	Point out the diagnosis and implement the prevention of any teeth eruption disturbance.	Lectures, seminars	Continuous evaluation, written examination
1.67	Know the genetic contribution to dental maturation.	Lectures, seminars	Continuous evaluation, written examination
1.68	Understand the definitions and standards of growth.	Lectures, seminars	Continuous evaluation, written examination
1.69	Recognize the growth pattern and variability.	Lectures, seminars	Continuous evaluation, written examination
1.70	Identify and describe the components and gross organization of bone.	Lectures, seminars	Continuous evaluation, written examination
1.71	Identify and describe the organization of the cartilage.	Lectures, seminars	Continuous evaluation, written examination
1.72	Recognize the three major cartilage types.	Lectures, seminars	Continuous evaluation, written examination
1.73	Describe the process of intramembranous and endochondral ossification.	Lectures, seminars	Continuous evaluation, written examination
1.74	Define the two types of growth movement: remodeling and displacement.	Lectures, seminars	Continuous evaluation, written examination



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1.75	Understand the V principle in craniofacial growth and development.	Lectures, seminars	Continuous evaluation, written examination
1.76	Recognize the fields of remodeling.	Lectures, seminars	Continuous evaluation, written examination
1.77	Recognize the different levels of the Evidence Pyramid.	Lectures, seminars	Continuous evaluation, written examination
1.78	Define the different variables in a research study, and classify them properly.	Lectures, seminars	Continuous evaluation, written examination
1.79	Select the appropriate research design to test their hypothesis.	Lectures, seminars	Continuous evaluation, written examination
1.80	Identify threats to internal and external validity.	Lectures, seminars	Continuous evaluation, written examination
1.81	Distinguish the potential and limitations of the various appliances in orthodontics.	Lectures, seminars	Continuous evaluation, written examination
1.82	Select and design the proper appliance adapted to different clinical situation.	Lectures, seminars	Continuous evaluation, written examination
1.83	Know the indication of each kind of radiograph (2D or 3D).	Lectures, seminars	Continuous evaluation, written examination
1.84	Identify the proper technique of acquisition of extra and intraoral photographs.	Lectures, seminars	Continuous evaluation, written examination
1.85	Recognize the use and indication of the various wires in orthodontics.	Lectures, seminars	Continuous evaluation, written examination
1.86	Identify a proper diagnosis and conceive a proper treatment plan adapted to the orthodontic malocclusion.	Lectures, seminars	Continuous evaluation, written examination
1.87	Determine one or more orthodontic treatment plan.	Lectures, seminars	Continuous evaluation, written examination
1.88	Identify the differences in the various straight wire techniques.	Lectures, seminars	Continuous evaluation, written examination
1.89	Apply the appropriate brackets prescription adapted to the used technique.	Lectures, seminars	Continuous evaluation, written examination
1.90	Explain orthodontic archwire sequences and their rationale.	Lectures, seminars	Continuous evaluation, written examination
1.91	Establish a proper treatment sequence according to the Bioprogressive technique.	Lectures, seminars	Continuous evaluation, written examination
1.92	Recognize the built-in brackets' information in the different prescriptions..	Lectures, seminars	Continuous evaluation, written examination
1.93	Understand the differences in head forms and patterns.	Lectures, seminars	Continuous evaluation, written examination
1.94	Describe the differences in facial features and head form between males and females.	Lectures, seminars	Continuous evaluation, written examination
1.95	Recognize the anatomy and growth process of the cranial base and vault.	Lectures, seminars	Continuous evaluation, written examination
1.96	Know the patterns and mechanisms of cranial base and vault growth in all three planes of space.	Lectures, seminars	Continuous evaluation, written examination
1.97	Recognize the anatomy and growth process of the nasomaxillary complex.	Lectures, seminars	Continuous evaluation, written examination



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1.98	Know the patterns and mechanisms of nasomaxillary growth in all three planes of space.	Lectures, seminars	Continuous evaluation, written examination
1.99	Classify the different theories of craniofacial growth and development and the related control of the mandibular growth process.	Lectures, seminars	Continuous evaluation, written examination
1.100	Define some important terms related to growth as bone apposition and resorption, remodeling, drift (transformation), displacement (translation) and differential growth.	Lectures, seminars	Continuous evaluation, written examination
1.101	Determine the jaw-opening and jaw-closing muscles	Lectures, seminars	Continuous evaluation, written examination
1.102	Recognize the effect of the systematic factor (somatotrophic hormone), the orthopedic therapy and the influence of the circadian cycle on condylar growth	Lectures, seminars	Continuous evaluation, written examination
1.103	Identify the different theories of craniofacial growth and development	Lectures, seminars	Continuous evaluation, written examination
1.104	Understand the functional matrix theory and its components	Lectures, seminars	Continuous evaluation, written examination
1.105	Prepare an appropriate research proposal	Lectures, seminars	Continuous evaluation, written examination
1.106	Develop the methodology of a research project	Lectures, seminars	Continuous evaluation, written examination
1.107	Report adequately the results of their study	Lectures, seminars	Continuous evaluation, written examination
1.108	Apply appropriate descriptive and inferential statistics for a particular research design	Lectures, seminars	Continuous evaluation, written examination
1.109	Prepare the residents to undertake the final written exam.	Lectures, seminars	Continuous evaluation, written examination
1.110	Explain to the residents how to recognize the problems and to set an objective for each problem.	Lectures, seminars	Continuous evaluation, written examination
1.111	Analyze orthodontic cases and establish appropriate diagnosis and treatment plans.	Lectures, seminars	Continuous evaluation, written examination
1.112	Recognize the laws regulating the dental practice in Lebanon	Lectures, seminars	Continuous evaluation, written examination
1.113	Distinguish the relationship between the practicing dentist and his colleagues, assistants and pharmacists	Lectures, seminars	Continuous evaluation, written examination
1.114	Define medical duties and responsibilities	Lectures, seminars	Continuous evaluation, written examination
1.115	Describe forensic medical examinations of cadavers	Lectures, seminars	Continuous evaluation, written examination



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1.116	Identify the injuries and trauma signs in forensics	Lectures, seminars	Continuous evaluation, written examination
1.117	Recognize the factors used in human identification and mainly the teeth.	Lectures, seminars	Continuous evaluation, written examination
1.118	Apply thorough analysis of 2D and 3D radiographic tools	Lectures, seminars	Continuous evaluation, written examination
1.119	Summarize extraoral and intraoral examinations	Lectures, seminars	Continuous evaluation, written examination
1.120	Prepare a detailed study models analysis including space analysis	Lectures, seminars	Continuous evaluation, written examination
1.121	Establish a sound diagnosis for recently enrolled patients	Lectures, seminars	Continuous evaluation, written examination
1.122	Organize a comprehensive case presentation using Microsoft Powerpoint	Lectures, seminars	Continuous evaluation, written examination
1.123	Investigate clinical situations with the help of all diagnostic tools	Lectures, seminars	Continuous evaluation, written examination
1.124	Identify treatment objectives and treatment limitations or challenges	Lectures, seminars	Continuous evaluation, written examination
1.125	Recognize the importance of facial esthetics in treatment planning	Lectures, seminars	Continuous evaluation, written examination
1.126	Discuss different treatment modalities and approaches	Lectures, seminars	Continuous evaluation, written examination
1.127	Recognize and apply all key elements for creating a proper slideshow case presentation	Lectures, seminars	Continuous evaluation, written examination
1.128	Evaluate meticulously new cases	Lectures, seminars	Continuous evaluation, written examination
1.129	Assess in details all ongoing cases as well as transferred cases through recent clinical examination and complimentary diagnostic tools.	Lectures, seminars	Continuous evaluation, written examination
1.130	Develop adult patients treatment plan through an interdisciplinary approach	Lectures, seminars	Continuous evaluation, written examination
1.131	Integrate orthognathic surgery into treatment plan of severe malocclusions and facial disharmony	Lectures, seminars	Continuous evaluation, written examination
1.132	Describe different treatment mechanics with effects and side effects	Lectures, seminars	Continuous evaluation, written examination
1.133	Review in details all ongoing cases as well as transferred cases through recent clinical examination and complimentary diagnostic tools.	Lectures, seminars	Continuous evaluation, written examination
1.134	Defend treatment plans keeping in mind particularities for each case	Lectures, seminars	Continuous evaluation, written examination
1.135	Identify treatment objectives and treatment limitations or challenges	Lectures, seminars	Continuous evaluation, written examination
1.136	Value the importance of facial esthetics and their relationship with orthodontic	Lectures, seminars	Continuous evaluation, written examination



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	treatment plan		
1.137	Integrate other dental and surgical disciplines into treatment plan of complex malocclusions	Lectures, seminars	Continuous evaluation, written examination
1.138	Identify treatment mistakes and how to correct/avoid them	Lectures, seminars	Continuous evaluation, written examination
1.139	Recognize and enhance all key elements for creating a proper slideshow case presentation	Lectures, seminars	Continuous evaluation, written examination
1.140	Assess in details all finished and ongoing cases through recent clinical examination and complimentary diagnostic tools	Lectures, seminars	Continuous evaluation, written examination
1.141	Evaluate finishing and detailing procedures	Lectures, seminars	Continuous evaluation, written examination
1.142	Recognize indications and responses of various orthodontic appliances	Lectures, seminars	Continuous evaluation, written examination
1.143	Design the use of skeletal anchorage devices	Lectures, seminars	Continuous evaluation, written examination
1.144	Learn and discuss different treatment modalities and approaches	Lectures, seminars	Continuous evaluation, written examination
1.145	Evaluate the mechanical aspect when using different techniques	Lectures, seminars	Continuous evaluation, written examination
1.146	Identify the iatrogenic lesions caused by orthodontic treatment	Lectures, seminars	Continuous evaluation, written examination
1.147	Discuss the different retention procedures.	Lectures, seminars	Continuous evaluation, written examination
1.148	Discuss relapse possibilities	Lectures, seminars	Continuous evaluation, written examination
1.149	Describe the significance of the topic	Lectures, seminars	Continuous evaluation, written examination
1.150	Highlight on the background of the subject discussed	Lectures, seminars	Continuous evaluation, written examination
1.151	Identify relevant and important journals and researchers	Lectures, seminars	Continuous evaluation, written examination
1.152	Describe a research protocol	Lectures, seminars	Continuous evaluation, written examination
1.153	Understand the value of article discussion and scientific review	Lectures, seminars	Continuous evaluation, written examination
1.154	Reproduce the study design and methodology	Lectures, seminars	Continuous evaluation, written examination
1.155	Label important journals/authors	Lectures, seminars	Continuous evaluation, written examination
1.156	Examine statistical analysis and experimental results	Lectures, seminars	Continuous evaluation, written examination
1.157	Describe and analyze the significance of the topic	Lectures, seminars	Continuous evaluation, written examination
1.158	Recognize important data and results in the article	Lectures, seminars	Continuous evaluation, written examination



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1.159	Employ research findings in the clinical domain	Lectures, seminars	Continuous evaluation, written examination
1.160	Compose a scientific paper	Lectures, seminars	Continuous evaluation, written examination
1.161	Comment on scientific papers	Lectures, seminars	Continuous evaluation, written examination
1.162	Compare data between studies of same topic/design	Lectures, seminars	Continuous evaluation, written examination
1.163	Construct a scientific paper/study design	Lectures, seminars	Continuous evaluation, written examination
1.164	Employ study results in clinical practice	Lectures, seminars	Continuous evaluation, written examination
1.165	Identify flaws in study designs	Lectures, seminars	Continuous evaluation, written examination
1.166	Report data in an article or dissertation	Lectures, seminars	Continuous evaluation, written examination
1.167	Assess and evaluate scientific papers	Lectures, seminars	Continuous evaluation, written examination
1.168	Interpret and compare research data	Lectures, seminars	Continuous evaluation, written examination
1.169	Employ evidence-based results in the clinical practice	Lectures, seminars	Continuous evaluation, written examination
1.170	Construct a scientific paper/study design.	Lectures, seminars	Continuous evaluation, written examination
1.171	Develop and investigate hypotheses and propose research topics.	Lectures, seminars	Continuous evaluation, written examination
1.172	Report data in an article or dissertation.	Lectures, seminars	Continuous evaluation, written examination
02	Practical skills		
2.1	Evaluate the ability to identify, trace and interpret cephalometric radiographs.	Lectures, seminars, workshops	Continuous evaluation, written examination
2.2	Apply different bending procedures related to orthodontic levelling loops	Lectures, seminars, workshops	Continuous evaluation, written examination
2.3	Manipulate proper techniques to bend different arch forms with a straight wire	Lectures, seminars, workshops	Continuous evaluation, written examination
2.4	Integrate different types of bends on a wire to mimic its use on a dental arch	Lectures, seminars, workshops	Continuous evaluation, written examination
2.5	Differentiate between the indication of fixed and removable retainers	Lectures, seminars, workshops	Continuous evaluation, written examination
2.6	Apply the banding and bonding procedures	Lectures, seminars, workshops	Continuous evaluation, written examination
2.7	Operate on bending different kind of	Lectures, seminars,	Continuous evaluation, written



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	orthodontic Tweed loops	workshops	examination
2.8	Integrate in the archwire the first, second and third order informations	Lectures, seminars, workshops	Continuous evaluation, written examination
2.9	Manipulate the soldering procedure	Lectures, seminars, workshops	Continuous evaluation, written examination
2.10	Apply Edgewise and Tweed mechanics on Typodont	Lectures, seminars, workshops	Continuous evaluation, written examination
2.11	Make case analysis and diagnosis	Lectures, seminars, workshops	Continuous evaluation, written examination
2.12	Apply the appropriate Typodont set-up	Lectures, seminars, workshops	Continuous evaluation, written examination
2.13	Apply the read-out	Lectures, seminars, workshops	Continuous evaluation, written examination
2.14	Manipulate the Head Gear and Class III elastics wearing	Lectures, seminars, workshops	Continuous evaluation, written examination
2.15	Design the appropriate levelling loops	Lectures, seminars, workshops	Continuous evaluation, written examination
2.16	Predict the appropriate sequential bending according to Tweed-Merrifield philosophy	Lectures, seminars, workshops	Continuous evaluation, written examination
2.17	Manipulate the arch card fabrication	Lectures, seminars, workshops	Continuous evaluation, written examination
2.18	Practice the finishing and recovery	Lectures, seminars, workshops	Continuous evaluation, written examination
2.19	Design the appropriate wires with the concerning loops	Clinical sessions	Continuous evaluation / Clinical examination
2.20	Manipulate the J Hooks wearing	Clinical sessions	Continuous evaluation / Clinical examination
2.21	Develop the suitable clinical setting (dress code, workplace, hygiene, instruments...)	Clinical sessions	Continuous evaluation / Clinical examination
2.22	Set up an appropriate extra & intraoral clinical examination	Clinical sessions	Continuous evaluation / Clinical examination
2.23	Practice a functional examination (breathing, TMJ, dental occlusion...)	Clinical sessions	Continuous evaluation / Clinical examination
2.24	Identify the necessary radiographs for the patient case and be able to analyze them	Clinical sessions	Continuous evaluation / Clinical examination
2.25	Collect necessary records (extra & intraoral photos, dental casts, intraoral digital models)	Clinical sessions	Continuous evaluation / Clinical examination
2.26	Evaluate information required for treatment	Clinical sessions	Continuous evaluation /



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	planning including the interdisciplinary one		Clinical examination
2.27	Argue all possible treatment options including the provision of no treatment to the patient/ parents or tutors as well as instructors	Clinical sessions	Continuous evaluation / Clinical examination
2.28	Complete the orthodontic records (photos, Xrays, plaster or digital study models, typed treatment plan, sequences, biomechanics required...) and material necessary for the clinical session	Clinical sessions	Continuous evaluation / Clinical examination
2.29	Explain to the patients or parents/guardians the properties and limitations of the different material options	Clinical sessions	Continuous evaluation / Clinical examination
2.30	Practice placing the orthodontic bands properly	Clinical sessions	Continuous evaluation / Clinical examination
2.31	Operate bonding the brackets on the teeth following the instructions agreed in the case presentation	Clinical sessions	Continuous evaluation / Clinical examination
2.32	Choose and insert the orthodontic archwires related to the movement required	Clinical sessions	Continuous evaluation / Clinical examination
2.33	Explain all instructions for appropriate hygiene, avoidance of discomfort, and respect of food recommendations.	Clinical sessions	Continuous evaluation / Clinical examination
2.35	Validate clinical consultation for new patients to fill the requirements needed regarding the types of malocclusion and number of cases	Clinical sessions	Continuous evaluation / Clinical examination
2.36	Classify the file of the patient in the common software of the School of Dental Medicine	Clinical sessions	Continuous evaluation / Clinical examination
2.37	Apply a proper cleaning of the workplace and prepare the instruments and material for the next patient	Clinical sessions	Continuous evaluation / Clinical examination
2.38	Evaluate the sterilization cycle to guarantee the good conduct of the procedure	Clinical sessions	Continuous evaluation / Clinical examination
2.39	Organize receiving all transfer patients from the colleagues in way to finish their curriculum	Clinical sessions	Continuous evaluation / Clinical examination



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2.40	Investigate the accurate anchorage required as devices, timing, and duration	Clinical sessions	Continuous evaluation / Clinical examination
2.41	Manipulate the insertion of the Micro-implant device as modern anchorage if planed and needed	Clinical sessions	Continuous evaluation / Clinical examination
2.42	Validate the different stages of the treatment until the Class I Angle is reached with proper alignment and levelling	Clinical sessions	Continuous evaluation / Clinical examination
2.43	Manage the finishing step of the five cases required to complete the curriculum	Clinical sessions	Continuous evaluation / Clinical examination
2.44	Establish the debonding procedure and put in place the appropriate retainers either on the maxillae and the mandible	Clinical sessions	Continuous evaluation / Clinical examination
2.45	Make the appropriate scaling and cleaning before taking the final records	Clinical sessions	Continuous evaluation / Clinical examination
03	Social Skills		
3.1	Discuss cooperatively with the maxillofacial surgeon to construct an orthodontic/surgical case, from diagnosis to treatment planning and outcome simulation.	Lectures, seminars	Continuous evaluation, written examination
3.2	Respect ethical considerations while prescribing radiographs.	Lectures, seminars	Continuous evaluation, written examination
3.3	Collaborate openly with the value of addressing the patient with TMD to a specialist and work in close collaboration with him.	Lectures, seminars	Continuous evaluation, written examination
3.4	Collaborate openly with other specialties on specific dental situations.	Lectures, seminars	Continuous evaluation, written examination
3.5	Benefit from contemporary novel orthodontic techniques and their employment in interdisciplinary treatment planning.	Lectures, seminars	Continuous evaluation, written examination
3.6	Discuss openly with the maxillofacial surgeon to construct an orthodontic/surgical case, from diagnosis to treatment planning and outcome simulation.	Lectures, seminars	Continuous evaluation, written examination
3.7	Cooperate positively with other disciplines to optimize orthodontic treatment outcome.	Lectures, seminars	Continuous evaluation, written examination
3.8	Acquire the will and courage to try new	Lectures, seminars	Continuous evaluation, written



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	approaches and get familiar with the latest evidence-based techniques.		examination
3.9	Recognize and assume negative aspects of orthodontic treatment.	Lectures, seminars	Continuous evaluation, written examination
3.10	Collaborate openly with other specialists to optimize orthodontic treatment outcomes.	Lectures, seminars	Continuous evaluation, written examination
3.11	Gain a positive and cooperative attitude when dealing with complex clinical problems.	Lectures, seminars	Continuous evaluation, written examination
3.12	Acquire the confidence to try new approaches and get familiar with the latest evidence-based techniques.	Lectures, seminars	Continuous evaluation, written examination
3.13	Work positively and collegially with different other specialists.	Lectures, seminars	Continuous evaluation, written examination
3.14	Gain a positive and cooperative attitude when dealing with complex clinical problems.	Lectures, seminars	Continuous evaluation, written examination
3.15	Acquire the confidence to try new approaches and get familiar with the latest evidence-based techniques.	Lectures, seminars	Continuous evaluation, written examination
3.16	Recognize and assume negative aspects of orthodontic treatment.	Lectures, seminars	Continuous evaluation, written examination
3.17	Acquire a positive and cooperative attitude when dealing with complex clinical problems	Lectures, seminars	Continuous evaluation, written examination
3.18	Acquire the confidence to try new approaches and get familiar with the latest evidence-based techniques	Lectures, seminars	Continuous evaluation, written examination
3.19	Recognize and assume negative aspects of orthodontic treatment	Lectures, seminars	Continuous evaluation, written examination
3.20	Develop a respectful attitude toward patients while clinical examination	Lectures, seminars	Continuous evaluation, written examination
3.21	Communicate with a positive approach while doing the orthodontic diagnosis	Lectures, seminars	Continuous evaluation, written examination
3.22	Recognize the importance and appropriate use of imaging for the benefit of the patient	Lectures, seminars	Continuous evaluation, written examination
3.23	Exhibit an awareness of the legal basis of protecting the patient and staff from radiation exposure	Lectures, seminars	Continuous evaluation, written examination
3.24	Recognize the importance and appropriate use of a specific orthodontic technique for a specific patient	Lectures, seminars	Continuous evaluation, written examination
3.25	Recognize the importance and appropriate use of a specific orthodontic prescription for a specific patient	Lectures, seminars	Continuous evaluation, written examination
3.26	Recognize that high standards in orthodontics combined with recent	Lectures, seminars	Continuous evaluation, written examination



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	advances and technology allows the clinician to treat successfully most of molar extraction cases.		
3.27	Extend the available options for the most convenient treatment plan	Lectures, seminars	Continuous evaluation, written examination
3.28	Choose the best positive approach in order to fulfill the patient complaint	Lectures, seminars	Continuous evaluation, written examination
3.29	Connect effectively with the patient and explain clearly the options of treatment	Lectures, seminars	Continuous evaluation, written examination
3.30	Develop a critical eye regarding the existing literature	Lectures, seminars	Continuous evaluation, written examination
3.31	Connect positively and objectively within a research team	Lectures, seminars	Continuous evaluation, written examination
3.32	Demonstrate a motivation to conduct sound and relevant research projects	Lectures, seminars	Continuous evaluation, written examination
3.33	Identify ethically the cases where the radiation exposure is needed for the indication required	Lectures, seminars	Continuous evaluation, written examination
3.34	Realize the need for the explanation of treatment options to the patient including the risks.	Lectures, seminars	Continuous evaluation, written examination
3.35	Recognize the importance of iatrogenic effects of orthodontics.	Lectures, seminars	Continuous evaluation, written examination
3.36	Demonstrate the need for the explanation of treatment progress.	Lectures, seminars	Continuous evaluation, written examination
3.37	Connect effectively with the patient and explain clearly the options of treatment related to the enhancement of differential growth and the need for orthognatic surgery	Lectures, seminars	Continuous evaluation, written examination
3.38	Evaluate critically research articles and peer-reviewed journal articles.	Lectures, seminars	Continuous evaluation, written examination
3.39	Communicate positively and objectively within a research team.	Lectures, seminars	Continuous evaluation, written examination
3.40	Reconstruct the scientific curiosity to search for the evidence behind new diagnosis and treatment approaches	Lectures, seminars	Continuous evaluation, written examination
3.41	Recognize the value of the contents and importance of the consent forms.	Lectures, seminars	Continuous evaluation, written examination
3.42	Outline the patients' rights and responsibilities.	Lectures, seminars	Continuous evaluation, written examination
3.43	Debate and discuss with confidence in the presence of faculty members and residents	Lectures, seminars	Continuous evaluation, written examination
3.44	Develop communication skills and familiarity with new digital technologies for an oral presentation	Lectures, seminars	Continuous evaluation, written examination
3.45	Understand the importance of a meticulous diagnosis and efficient treatment planning	Lectures, seminars	Continuous evaluation, written examination



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	for the benefit of the patient		
3.46	Argue and discuss different point of views effectively	Lectures, seminars	Continuous evaluation, written examination
3.47	Improve communication skills and computer-based tools for oral presentations	Lectures, seminars	Continuous evaluation, written examination
3.48	Assess critically treatment progress and understand the evolvement of the malocclusion	Lectures, seminars	Continuous evaluation, written examination
3.49	Argue and discuss different point of views effectively	Lectures, seminars	Continuous evaluation, written examination
3.50	Value timely effective orthodontic care	Lectures, seminars	Continuous evaluation, written examination
3.51	Analyze treatment progress and understand the evolvement of the malocclusion	Lectures, seminars	Continuous evaluation, written examination
3.52	Evaluate and discuss different treatment modalities	Lectures, seminars	Continuous evaluation, written examination
3.53	Develop an analytical thinking open to valid suggestions	Lectures, seminars	Continuous evaluation, written examination
3.54	Value timely effective orthodontic care	Lectures, seminars	Continuous evaluation, written examination
3.55	Value the importance of a meticulous diagnosis and efficient treatment planning for the benefit of the patients.	Lectures, seminars	Continuous evaluation, written examination
3.56	Recognize the necessity of combining knowledge, skills, and research in orthodontic management	Lectures, seminars	Continuous evaluation, written examination
3.57	Develop self-assessment attitude	Lectures, seminars	Continuous evaluation, written examination
3.58	Summarize the main conclusions of the article	Lectures, seminars	Continuous evaluation, written examination
3.59	Discuss the interest of the article on a theoretical and practical level	Lectures, seminars	Continuous evaluation, written examination
3.60	Interpret the topic from a research perspective	Lectures, seminars	Continuous evaluation, written examination
3.61	Summarize important information drawn from the article	Lectures, seminars	Continuous evaluation, written examination
3.62	Interpret the clinical and theoretical significance of articles	Lectures, seminars	Continuous evaluation, written examination
3.63	Integrate the scientific results to the clinical practice	Lectures, seminars	Continuous evaluation, written examination
3.64	Discuss new advances in orthodontics	Lectures, seminars	Continuous evaluation, written examination
3.65	Understand the importance of evidence-based clinical care approach	Lectures, seminars	Continuous evaluation, written examination
3.66	Recognize the importance of new advances in orthodontics and the extent of their applicability	Lectures, seminars	Continuous evaluation, written examination



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3.67	Understand the importance of substantiating theoretical hypotheses	Lectures, seminars	Continuous evaluation, written examination
3.68	Recognize the importance of scientifically substantiating theoretical and practical hypotheses	Lectures, seminars	Continuous evaluation, written examination
3.69	Compare study results and data and implement them to improve clinical practice	Lectures, seminars	Continuous evaluation, written examination

Program Learning Outcomes Mapping Matrix

COURSE CODE NUMBERS: 1= BASC M1 101; 2= BASC M1 102; 3=BASC M1 103; 4=BASC M1 104; 5=BASC M1 105;6=MNGT M1 101; 7=MNGT M1 102; 8=ORTD M1 101; 9=ORTD M1 102; 10=ORTD M1 103; 11=ORTD M1 104; 12=ORTD M1 105; 13=ORTD M1 106; 14=ORTD M1 107; 15=ORTD M1 108; 16=ORTD M1 109; 17=ORTD M1 110; 18=ORTD M1 111; 19=BASC M2 106; 20=BASC M2 107; 21=BASC M2 108; 22=BASC M2 109; 23=BASC M2 110; 24= BASC M2 111; 25=BASC M2 112; 26=ORTD M2 112; 27=ORTD M2 113; 28=ORTD M2 114; 29=ORTD M2 115; 30=ORTD M2 116; 31=ORTD M2 117; 32=ORTD M2 118; 33=ORTD M2 119; 34=ORTD M2 120; 35=ORTD M2 121; 36=ORTD M2 122; 37=ORTD M2 123; 38=BASC M3 201; 39=ORTD M3 201; 40=ORTD M3 202; 41=ORTD M3 203; 42= ORTD M3 204; 43=ORTD M3 205; 44=ORTD M3 206; 45=ORTD M3 207; 46=ORTD M3 208; 47=ORTD M3 209; 48=ORTD M4 210; 49=ORTD M4 211; 50=ORTD M4 212; 51=ORTD M4 213; 52= ORTD M4 214; 53=DISS M4 401; 54=ORTD M4 215; 55=ORTD M5 301; 56=ORTD M5 302; 57= ORTD M5 303; 58=ORTD M5 304; 59=ORTD M5 305; 60= DISS M5 402; 61= ORTD M5 306; 62=ORTD M6 307; 63=ORTD M6 308; 64=ORTD M6 309; 65=ORTD M6 310; 66=ORTD M6 311; 67= DISS M6 403; 68=ORTD M6 312.

DOMAINS	COMPETENCIES	COURSE NUMBERS
<p>Domain 1: Professionalism On graduation a dental specialist will have the knowledge and skills to demonstrate autonomy, expert judgment, adaptability and responsibility as a practitioner and show leadership</p>	<p>A graduate specialist is expected to be competent in the following, as relevant to the specialty:</p> <p>a. Recognizing the personal limitations and scope of the specialty and knowing when to refer or seek advice appropriately</p> <p>b. Practicing with personal and professional integrity, honesty and trustworthiness</p> <p>c. Providing patient-centered care, including selecting and prioritizing treatment options that are compassionate and respectful of patients' best interests, dignity and choices and which seek to improve community oral health</p> <p>d. Understanding and applying the moral, cultural, ethical principles and legal responsibilities involved in the</p>	<p>10, 11, 15, 18, 27, 28, 29, 33, 37, 47, 49, 54, 56, 61, 62, 68.</p>



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	<p>provision of specialist dental care to individual patients, to communities and populations</p> <p>e. Displaying appropriate professional behavior and communication towards all members of the dental team and referring health practitioner/s</p> <p>f. Understanding and applying legislation including that related to record-keeping</p> <p>g. Demonstrating specialist professional growth and development through research and learning</p> <p>h. Supporting the professional development and education</p>	
<p>Domain 2: Communication and social skills with professionals and in society</p> <p>On graduation a dental specialist will be able to interpret and transmit knowledge, skills and ideas to dental and non-dental audiences.</p>	<p>A graduate specialist is expected to be competent in the following, as relevant to the specialty:</p> <p>a. Identifying and understanding a patient's, or their parent's, guardian's or career's expectations, desires and attitudes when planning and delivering specialist treatment</p> <p>b. Communicating effectively with patients, their families, relatives and careers in a manner that takes into account factors such as their age, intellectual development, social and cultural background</p> <p>c. Use of technological and telecommunication aids in planning and delivering specialist treatment</p> <p>d. Communicating effectively in all forms of health and legal reporting, and</p> <p>e. Interpreting and communicating knowledge, skills and ideas.</p>	<p>13, 16, 31, 35, 45, 51, 58, 64.</p>



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Domain 3: Patient-centered care

On graduation a dental specialist will, with a high level of personal autonomy and accountability, be able to apply highly specialized knowledge and skills in a discipline or professional practice. This includes clinical information gathering, diagnosis and management planning, clinical treatment and evaluation.

A graduate specialist is expected to be competent in the following, as relevant to the specialty:

- a. Applying decision-making, clinical reasoning and judgment to develop a comprehensive diagnosis and treatment plan by interpreting and correlating findings from the history, clinical examinations, imaging and other diagnostic tests
- b. Managing complex cases, including compromised patients with multidisciplinary management, and
- c. Managing complications.

Specific

A graduate specialist is expected to be competent in the following, as relevant to the specialty:

- a. Identify the necessary radiographs for the patient case and be able to analyze them
- b. Complete the orthodontic records (photos, Xrays, plaster or digital study models, typed treatment plan, sequences, biomechanics required...) and material necessary for the clinical session
- c. Make case analysis and diagnosis Evaluate information required for treatment planning including the interdisciplinary one
- d. Argue all possible treatment options including the provision of no treatment to the patient/ parents or tutors as well as instructors
- e. Operate bonding the brackets on the teeth following the

10, 11, 15, 17, 18, 29, 33, 36, 37, 44, 46, 47, 49, 52, 54, 56, 59, 61, 62, 66, 68



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	<p>instructions agreed in the case presentation</p> <ul style="list-style-type: none"> f. Practice placing the orthodontic bands properly g. Choose and insert the orthodontic archwires related to the movement required h. Investigate the accurate anchorage required as devices, timing, and duration i. Manipulate the Head Gear and Class III elastics wearing j. Manipulate the J Hooks wearing k. Practice the finishing and recovery l. Manipulate the insertion of the Micro-implant device as modern anchorage if planed and needed m. Establish the debonding procedure and put in place the appropriate retainers either on the maxillae and the mandible. 	
<p>Domain 4: Scientific knowledge and safe clinical practice</p> <p>On graduation a dental specialist will have a body of knowledge that includes the extended understanding of recent developments in a discipline and its professional practice, as well as knowledge of research principles and methods applicable to the specialty and its professional practice.</p>	<p>A graduate specialist is expected to be competent in the following areas of knowledge, as relevant to the specialty:</p> <ul style="list-style-type: none"> a. Historical and contemporary literature b. The scientific basis of dentistry including the relevant biological, medical and psychosocial sciences c. Development, physiology and pathology of hard and soft tissues of the head and neck d. The range of investigative, technical and clinical procedures, and e. Management and treatment planning with multidisciplinary engagement for complex cases, including compromised patients. <p>Specific</p>	<p>1, 2, 3, 4, 5, 6,7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 39, 40, 41,42, 43, 44,5,46,47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68.</p>



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	<p>A graduate specialist is expected to be competent in the following areas of knowledge, as relevant to the specialty:</p> <ol style="list-style-type: none"> a. Apply bending different kind of orthodontic levelling loops b. Manipulate performing different arch forms with a straight wire c. Integrate different types of bends on a wire to mimic its use on a dental arch d. Apply the banding and bonding procedures e. Integrate in the archwire the first, second and third order informations f. Manipulate the arch card fabrication g. Manipulate the soldering procedure h. Apply Edgewise and Tweed mechanics on Typodont i. Apply the read-out j. Design the appropriate wires with the concerning loops k. Analyze the principals involved in Orthodontic treatment in adolescent and adult patients l. Recognize removable, fixed appliances and technics in Orthodontics 	
<p>Domain 5: Critical thinking On graduation a dental specialist will have the expert, specialized cognitive and technical skills in a body of knowledge or practice to independently analyze critically, reflect on and synthesize complex information, problems, concepts and theories and research and apply established theories to a body of knowledge or practice.</p>	<p>A graduate specialist is expected to be competent in the following, as relevant to the specialty:</p> <ol style="list-style-type: none"> a. Critically evaluating scientific research and literature, products and techniques to inform evidence-based specialist practice b. Identify the different types of papers published c. Evaluate and find trusted scientific papers 	<p>14, 31, 33, 43, 49, 53, 57, 60, 63, 67</p>



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	<ul style="list-style-type: none"> d. Recognize the IMRAD structure and how to analyze a research paper e. Acquire the basic knowledge to interpret statistical tests and one logical thinking f. Review the evidence based concept and how to read such papers g. Apply the pico model and the problem based learning h. Write an abstract and estimate the importance of the abstract in a paper i. Analyze a paper from in all its details j. Synthesizing complex information, problems, concepts and theories. k. Innovate and apply new theories in a pilot investigation study that will be used for the final graduation thesis of residents l. Draw a dental office management strategy according to internal and external factors m. Reproduce an Action Plan in dental clinics n. Draw the map of stakeholders influence in dental workplace 	
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5. Admission Requirements for the program

- Dental degree recognized by the Ministry of Higher Education.
- A competitive exam

6. Attendance and Completion Requirements

Full time program: 5 full days
 3983 hours of learning divided into: Theory: 205 hours of basic sciences and 830 hours of Orthodontics. Practical Orthodontic work: 330 hours and clinical work 1868 hours. Thesis project: 750 hours.
 Requirements of completion: Pass all exams, all clinical requirements and the thesis defense.

E. Regulations for Student Assessment and Verification of Standards

What processes will be used for verifying standards of achievement (e.g., verify grading samples of tests or assignments? Independent assessment by faculty from another institution) (Processes may vary for different courses or domains of learning.)

- 1- Theory: Lectures, seminars, workshop have written continuing evaluation, written quizzes and a written final examination.
- 2- Practical: Continuous evaluation, final examination, oral examination
- 3- Clinical sessions: Continuous evaluation, final examination
- 4- Thesis defense: Oral presentation, jury questioning.

A. Student Administration and Support



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1. Student Academic Counseling

Describe arrangements for academic counseling and advising for students, including both scheduling of faculty office hours and advising on program planning, subject selection and career planning (which might be available at college level).

The full time instructor and the Master Coordinator are present all the time during the program and are ready to help residents. Program planning should be done before they choose this Master program. There is no definite career planning organized by the Department but the Master Coordinator helps the residents, if they ask, and follows their integration into the world of business after their graduation.

2. Student Appeals

Attach regulations for student appeals on academic matters, including processes for consideration of those appeals.

1- Refer to decree number 2626/ 26-7-2016 and Faculty Council decision found in appendixes

2- An unsatisfied resident who got a grade different from the one he thinks he should have has the right to ask for a second correction of his copy. He has to write an official letter to the Dean asking for a second correction and should present the letter within 72 hours from the day results were made public.

Feedback from the residents and evaluation of the course is obtained via surveys. This feedback contributes to the recommendations for improvement suggested by the course director.

The final marks of the residents in all courses are obtained and sent to the respective Department for review and analysis. Any course that is showing an odd distribution of the residents grades either positively or negatively is to be discussed with the course director. The reasons for this divergence and recommendations for avoidance are discussed and approved at the Department level.

The resident's evaluations of the course directors are supplied to the Master Coordinator. The course directors who scored below average are considered by the Head of Department and potential reasons are privately discussed with the course director. Those courses are kept under close monitoring.

G. Learning Resources, Facilities and Equipment

1a. What processes are followed by faculty and teaching staff for planning and acquisition of textbooks, reference and other resource material including electronic and web based resources?

1. Every year a list of new textbooks is provided by the Dean to the Head of Department. The Department Council meets to decide which new books need to be added to the Library and see whether some old books can be discarded.

1b. What processes are followed by faculty and teaching staff for planning and acquisition resources for library, laboratories, and classrooms.

The Department has its own classroom, laboratories and clinics. They are independent from all other Master programs or undergraduate programs. New materials are ordered from the Faculty administration by the Head of Department.

1. What processes are followed by faculty and teaching staff for evaluating the adequacy of textbooks, reference and other resource provisions?

Looking at catalogues and google searches to find new editions and new textbooks.

2. What processes are followed by students for evaluating the adequacy of textbooks, reference and other resource provisions?

Residents receive a list of all textbooks available at the Prosthodontics library and they can check also the Faculty of Medicine Library nearby.

3. What processes are followed for textbook acquisition and approval?

Once the Department council approves new textbooks, the list is sent back to the Dean and upon approval an order is set.

H. Faculty and other Teaching Staff

1.Appointments

Summarize the process of employment of new faculty and teaching staff to ensure that they are appropriately qualified and experienced for their teaching responsibilities.

In this Master, staff is recruited from the graduate program of the Faculty. Candidates must have at least 5 years of teaching experience, have a PhD or Doctorate degree and/or have a title of "Chargé de Cours" or higher. Preference is given to staff of our Department.



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If a teacher from outside the Department or the Faculty wants to join, he must have at least the same qualifications. Recruitment is done when one staff member retires or if for some reason the number of residents surpasses the ratio of 1 teacher for 3 residents (This situation happened in 2018). In some situations the recruitment can be temporary and is usually some help from the graduate staff of the Department.

2. Participation in Program Planning, Monitoring and Review

- a. Explain the process for consultation with and involvement of teaching staff in monitoring program quality, annual review and planning for improvement.

An accreditation body will examine the program every 4 years starting by the first accreditation this year.

- b. Explain the process of the Advisory Committee (if applicable)

The Department Council meets twice a year to evaluate the progress of the program and the need for a change or not.

3. Professional Development

What arrangements are made for professional development of faculty and teaching staff for:

- a. Improvement of skills in teaching and student assessment?

1. Staff attend regular local and international scientific meetings, seminars, webinars, training programs given by other Universities, Dental and Medical Societies, Dental Associations.

2. 2- Staff invite famous or well-known dentists around the world to come and give lectures, training sessions either practical or clinical

- b. Other professional development including knowledge of research and developments in their field of teaching specialty?

Professors have the duty to direct Doctorate projects. Other staff direct master thesis projects. All staff is encouraged to publish research papers to get a promotion.

4. Preparation of New Faculty and Teaching Staff

Describe the process used for orientation and induction of new, visiting or part time teaching staff to ensure full understanding of the program and the role of the course(s) they teach as components within it.

New staff is appointed according to their subspecialty in Orthodontics. They are given clinical responsibilities at first and attend lectures and seminars for some time before starting to give lectures and seminars under supervision for some time then they can integrate fully the jobs in the Master program. As for the practical sessions they help the main instructor until they can be on their own.

5. Part Time and Visiting Faculty and Teaching Staff

Provide a summary of Program/Department/ College/institution policy on appointment of part time and visiting teaching staff. (i.e. Approvals required, selection process, proportion of total teaching staff etc.)

The Department Council decides to invite a teacher for a punctual specific job during a lapse of time. If the person accepts he or she will give his conditions. The Head of Department transmits the proposal to the Dean who will discuss the matter with the Faculty Council. Once the approval is taken the Head of Department invites the foreign teacher to come.

I. Program Evaluation and Improvement Processes

1. Effectiveness of Teaching

- a. What QA processes are used to evaluate and improve the strategies for developing learning outcomes in the different domains of learning?

1. Surveys from residents about staff, programs
2. Surveys from staff about residents
3. Surveys from residents about examination procedures
4. Surveys from alumni

- b. What processes are used for evaluating the skills of faculty and teaching staff in using the planned strategies?

1. Master coordinator and /or Head of Department **may** attend any theoretical or practical session.
2. Staff is invited by a peer lecturer to attend his session.

Master coordinator and /or Head of Department **attend** a theoretical or practical session of new staff members if a senior staff does not accompany them.

2. Overall Program Evaluation

- a. What strategies are used in the program for obtaining assessments of the overall quality of the program and achievement of



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its intended learning outcomes:

(i) From current students and graduates of the program?

1. Survey at the end of each theoretical and practical course
2. Follow up by the Master Coordinator to contact post-graduate residents after they completed the program and started working in private practices.

(ii) From independent advisors and/or evaluator(s)?.

1. Accreditation procedure by experts every 4 years

(iii) From employers, Advisory Committee, and/or other stakeholders

1. This master has no employees other than the staff affected to the program

Attachments:

1. Copies of regulations and other documents referred to in template preceded by a table of contents.
2. Course specifications for all program courses including field experience specification if applicable.

Authorized Signatures

Name	Title	Signature	Date
Associate Professor Fidel NABBOUT	Head of Department		
Professor Toni ZEINOUN	Dean		